

Integer Adding

Short Answer

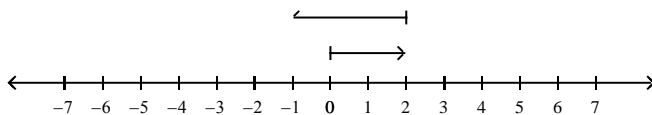
1. Let one white tile represent $+1$ and one black tile represent -1 .
What sum does this set of tiles model? Write the addition equation.



2. Let one white tile represent $+1$ and one black tile represent -1 .
What sum does this set of tiles model? Write the addition equation.



3. Let one white tile represent $+1$ and one black tile represent -1 .
What sum is modelled by 19 positive tiles and 16 negative tiles?
4. Add.
 $(+10) + (-11)$
5. Add.
 $(+5) + (-8)$
6. Write an addition equation modelled by the number line.



7. The temperature is 15°C and drops 8°C .
Write an addition equation to calculate the final temperature. What is the final temperature?
8. Sam owns a small business. He made a profit of \$7 on Saturday and lost \$10 on Sunday.
Find the total profit or loss for the weekend.
9. In a golf tournament, Joey got a score of $+11$ and Melissa got a score of -5 .
What was their combined score?
10. During the day the temperature was 3°C . At night, the temperature dropped 9°C .
What was the temperature at night?
11. Atoms contain charged particles called protons and electrons.

Each proton has a charge of $+1$, and each electron has a charge of -1 .
 A sulfur ion has 16 protons and 18 electrons.
 Find the overall charge.

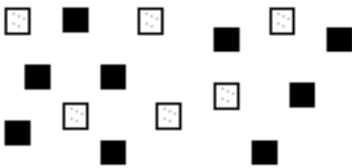
12. Use $<$, $>$, or $=$ to complete this sentence.

$$(+1) + (-14) \quad \square \quad (+7) + (-4)$$

13. Let one white tile represent $+1$ and one black tile represent -1 .
 Write the integer modelled by this set of tiles.



14. Let one white tile represent $+1$ and one black tile represent -1 .
 Write the integer modelled by this set of tiles.



15. Let one white tile represent $+1$ and one black tile represent -1 .
 Draw 2 different diagrams to model -5 . Use at least 10 tiles in each diagram.

16. Let one white tile represent $+1$ and one black tile represent -1 .

- a) Shade the tiles in the diagrams to model:
 i) a positive integer
 ii) a negative integer

i)



ii)



- b) Name the integers.

17. Let one white tile represent $+1$ and one black tile represent -1 .
 You have 18 white tiles and 26 black tiles.
 What is the greatest integer you can make using 20 tiles? What tiles would you use?
18. Let one white tile represent $+1$ and one black tile represent -1 .
 You have 8 white tiles and 13 black tiles.
 What is the least integer you can make using 17 tiles? What tiles would you use?
19. Let one white tile represent $+1$ and one black tile represent -1 .
 Using 23 tiles describe how you could model $+3$.

20. Let one white tile represent $+1$ and one black tile represent -1 .
You have 16 black tiles. How many tiles would you exchange for white tiles to model -10 ?
21. Add.
 $(-10) + (+7)$
22. Add.
 $(-6) + (-4)$
23. Copy and complete.
 $(-9) + \square = (+4)$
24. Copy and complete.
 $\square + (-6) = (-10)$
25. Copy and complete.
 $(+3) + \square = (-5)$
26. Represent the sentence with integers, then find the sum.
Mr Chen earned \$21 and spent \$15.
27. Represent the sentence with integers, then find the sum.
The temperature fell 12°C then rose 17°C .
- 28.
- a) Add: $(+7) + (-12)$
 - b) Add: $(-7) + (+12)$
 - c) What do you notice about the answers?
29. Copy and complete.
 $\square + (-5) = (-12)$
30. Copy and complete.
 $(+6) + \square = (-3)$
31. Write the opposite of each integer.
- a) $+9$
 - b) -6
 - c) -256
32. Roberto had \$41. He spent \$7 then earned \$37.
- a) Write an addition equation for this situation.
 - b) How much money did Roberto have at the end?
33. Is each statement always true, sometimes true, or never true?
Provide examples to support your answers.
- a) The sum of a negative integer and a positive integer is negative.
 - b) The sum of two negative integers is positive.

- c) The sum of two opposite integers is 0.

Problem

34. Let one white tile represent $+1$ and one black tile represent -1 .
The diagram shows 14 white tiles.
How many of them do you have to replace by black tiles to model $+2$?



35. Add.
 $(+6) + (-2) + (+8)$
36. Copy and complete.
 $(+5) + (-2) + \square = (+7)$
37. A diver starts at sea level, goes down 10 m, rises 3 m, drops 6 m and rises 11 m.
a) Represent the sentence with integers, then find the sum.
b) How much further must the diver rise to reach the surface?
38. Copy and complete.
 $(+9) + (-6) + (+4) + \square = +2$
39. An elevator on the 10th floor goes down 5 floors.
Then it goes up 12 floors, and finally down 10 floors.
What floor does it end up on? Write an addition equation.
40. The table shows the scores for teams of students playing a series of board games.

	Game 1	Game 2	Game 3
Team 1	-10	5	4
Team 2	-3	2	8

- a) Determine the total score for each team.
b) Which team had the higher score?